

ABSTRACT

1 A method for determining formation resistivity anisotropy in a wellbore environment.
2 The method of the present invention effectively extends the dynamic range of the existing
3 well logging service of the multi-component induction tool, allowing the use of this
4 service in wells drilled with conductive WBM systems. A sequential inversion
5 processing of galvanic array lateral log HDLL/MLL data or DLL/MLL and also multi-
6 component induction log (3DEXSM) data is used. The formation resistivity structure of
7 the near wellbore environment is determined using the galvanic measurements of the
8 array lateral log tool. The formation resistivity anisotropy of the undisturbed zone is
9 determined using the result of the inversion of the galvanic array data and inversion of
10 measurements of the multi-component induction tool